SPECIFICATION: CLEAN COPY

COUPON TICKET ISSUING SYSTEM

BACKGROUND OF THE INVENTION

The present invention relates generally to a coupon ticket-issuing system, and more particularly to a method and a system for issuing and displaying coupon information supplied through a network and/or digital broadcasting.

A known technique for accessing and downloading coupon information is to access a server system from a portable telephone through a network. As disclosed in JP-A-2001-256388, a bar code is affixed to a coupon, which is then read by a barcode reader installed at a store. The barcode information assigned to the coupon is subsequently sent to a server system through a network to ascertain the authenticity of the coupon.

However, in the conventional technique described above, it is impossible to manage the issue of coupons so that the coupons conform to the desires of users, or so that the conditions for issuing coupons on a user-by-user basis are specified. Further, when a user has a plurality of coupons, the user has to decide as to their effective use.

SUMMARY OF THE INVENTION

An object of the present invention is to provide a coupon information-issuing system which is capable of issuing coupon information corresponding to information desired by a user while setting the
5   conditions for issuing the coupon information based on attributes of the user.

Another object of the present invention is to provide a coupon information-issuing system which allows a plurality of coupon information processed by a
10   user to be used with enhanced efficiency.

In view of the above and other objectives of the present invention, which will become apparent in the following description, a system of such an arrangement is provided in which,
15   upon selection of certain coupon information by a user from advertisement-information-appended coupon information issued by a service provider, and upon satisfaction of the conditions for issuing the coupon information imposed by the service provider and the
20   conditions for receiving the coupon information as required by the user, the selected advertisement-information-appended coupon information is issued, whereon this issued advertisement-information-appended coupon information is sent to a receiver of the user.
25   The present invention further teaches that a plurality of coupon information stored in the receiver or user terminal is sorted, on a coupon-by-coupon basis, according to validity terms and/or discount rates.

Other objects, features and advantages of the invention will become apparent from the following description of the embodiments of the invention taken in conjunction with the accompanying drawings.

5 BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a block diagram showing a general configuration of a coupon information-issuing system according to an embodiment of the present invention.

Figure 2 is a view showing a system
10 configuration of the coupon information-issuing system according to an embodiment of the present invention.

Figure 3 is a functional block diagram showing schematically the structure of a service-providing server employed in the system shown in
15 Fig. 2.

Figure 4 is a functional block diagram showing schematically the structure of a user's digital television employed in the system shown in Fig. 2.

Figure 5 is a functional block diagram show-
20 ing schematically the structure of a user's portable telephone employed in the system shown in Fig. 2.

Figure 6 is a flowchart illustrating a processing procedure for storing coupon information separately from advertisement information after coupon
25 information attached to advertisement information is received by the user's digital television.

Figure 7 is a view showing, by way of

example, a screen image generated upon reception by the
user's digital television of the coupon information
appended to advertisement information.

Figure 8 is a view showing, by way of
example, images of advertisement information and coupon
information, respectively, which result from separation
or division of coupon information from advertisement
information as shown on the user digital television.

Figure 9 is a flowchart illustrating a
processing procedure for terminating issue of coupon
information when the issued number thereof exceeds a
predetermined value.

Fig. 10 is a view showing a table whose
contents are the conditions set up by a service
provider for issue of coupon information.

Figure 11 is a flowchart illustrating a
processing procedure for issuing coupon information
only when the conditions for receiving the coupon
information are satisfied.

Figure 12 is a table showing, by way of
example, the conditions for receiving the coupon infor-
mation.

Figure 13 is a flowchart illustrating a
processing procedure in a case in which coupon
information is issued in a number permissible for the
user.

Figure 14 is a flowchart illustrating a
processing procedure for issuing family-oriented

coupon information only to the representative of a family without issuing duplicate information to any other member of the family.

Figure 15 is a table showing, by way of example, family information of the user.

Figure 16 is a table showing family information concerning children of the user.

Figure 17 is a flowchart illustrating a processing procedure for updating only the items that are required to be altered upon reissue of coupon information issued on a previous occasion.

Figure 18 is a view showing, by way of example and respectively, coupon information tables before and after updating of conditions.

Figure 19 is a flowchart illustrating a processing procedure for displaying coupon information in an ascending order determined by the limits of the validity terms.

Figure 20 is a view showing, by way of example, a table that is referenced when sorting of the coupon information takes place.

Figure 21 is a view illustrating examples of the coupon information displayed on an image screen of a portable telephone after sorting the coupon information in an ascending order reflecting the final time limits of the validity terms and in a descending order reflecting discount rate values , respectively.

Figure 22 is a flowchart illustrating a

processing procedure for displaying concurrently on a single image screen the coupon information chosen from a plurality of coupon information which can be used in combination, if available, .

5   Figure 23 is a view showing, by way of example, screen images of coupon information which can be used in combination.

Figure 24 is a flowchart illustrating a processing procedure for displaying coupon information

10   until the remaining number of times coupon information can be displayed becomes zero.

Figure 25 shows a table indicating a state preceding the display of the coupon information and a table indicating a state succeeding to display of the

15   coupon information.

Figure 26 is a view showing, by way of example, a screen image of a portable telephone in which the remaining number of the coupon information is indicated.

20   Figure 27 is a flowchart illustrating a processing procedure for displaying the coupon information any desired times until the validity term has become invalid.

Figure 28 is a flowchart illustrating a

25   processing procedure for displaying alternately the coupon information and the ID information on an image screen of a portable telephone.

Figure 29 is a table showing ID information

of the user.

Figure 30 is a view illustrating examples of screen images displayed on a portable telephone when the coupon information is displayed as a front image with the ID information displayed as a second image.

Figure 31 is a flowchart for illustrating a processing procedure for displaying alternately advertisement information and coupon information on an image screen of a portable telephone.

Figure 32 is a view illustrating examples of screen images displayed on a portable telephone when advertisement information is displayed as a front image with the coupon information displayed as a second image.

DESCRIPTION OF THE EMBODIMENTS

The present invention will be described in detail with reference to what are presently considered as the preferred or typical embodiments of the invention and with reference to the drawings.

Embodiment 1

Figure 1 is a block diagram showing generally and schematically a configuration of a coupon information-issuing system according to an exemplary embodiment of the present invention. Referring to the figure, a television shop 101 may be, for example, an enterprise which is in charge of issuing advertisement information to which is appended coupon information.

Hereinafter, this information will be referred to as the advertisement-information-appended coupon information only for the convenience of description. It should, however, be appreciated that the same

5   information may equally be termed the coupon-information-appended advertisement information. The advertisement-information-appended coupon information as issued is sent to a service provider 102. The service provider 102 may be, for example, a

10   broadcasting station which broadcasts the advertisement-information-appended coupon information received from the television shop 101 to a user digital television receiver 103 designed for receiving the advertisement-information-appended coupon information

15   from the service provider 102 by making use of the television broadcast receiving function. In the user digital television 103, the advertisement information and the coupon information are separated from each other and stored individually. The coupon information

20   received by the digital television 103 may be transferred to a user portable telephone 104 by radio. The portable telephone 104 is one form of terminal apparatus possessed by the user.

Figure 2 is a view showing a system configu-
25   ration of a coupon information-issuing and -using system according to an embodiment of the present invention. Connected to the service-providing server 201 are databases 202, 203 and 204 in which

advertisement-information-appended coupon information
A, advertisement-information-appended coupon
information B and advertisement-information-appended
coupon information C, all of which have been provided
5 by a plurality of enterprises, are separately stored,
respectively. The individual coupon information
databases 202, 203 and 204 may be stored in a single
hard-disk drive system. The service-providing server
201 is capable of performing transactions of informa-
10 tion with a user digital television 205 through the
medium of a digital broadcast network and/or a
telecommunication line. The advertisement-information-
appended coupon information that has been stored, for
example, in the database 202 connected to the service-
15 providing server 201, and that has been sent from
service-providing server 201 to the user digital
television 205, is separated into advertising
information that is stored in database 206 and coupon
information that is stored in database 207, both
20 databases of which are located in digital television
205. In the example illustrated in Fig. 2, the
advertisement information is stored in the database 206
while the coupon information is stored in the database
207. Additionally provided in association with the
25 user digital television 205 is a database 208 for
storage of ID information. The user digital television
205 is capable of performing transaction of information
with a user portable telephone 209 through the medium

of a radio system. In a manner similar to the
incorporation of databases provided in association with
the user digital television 205, the user portable
telephone 209 incorporates therein a database 210 for
5 storing the advertisement information, a database 211
for storing the coupon information 211 and a database
212 for storing the ID information. At this juncture,
it should be mentioned that the ID information stored
in the database 208 for the user digital television 205
10 differs in general from the ID information stored in
the database 212 for the user portable telephone 209
and that this ID information cannot be rewritten by the
user. Ordinarily, each item of ID information stored
or contained in the database 208 is composed of a
15 combination of a user code and a membership ID number
for identification of the user registered in the
digital television shop system and user's attribute
information, whereas the ID information stored in the
database 212 for the user portable telephone 209 is
20 comprised of a combination of the telephone number and
the user's attribute information. The information
contained in the databases 210 to 212 may be stored in
the user portable telephone 209. Furthermore, in the
system shown in Fig. 2, a system configuration may be
25 used in which databases 210 to 212 are stored in
respective hard disk drives. These hard disk drives
are connected to a portable telephone server so that
the portable telephone server can read out and send the

information from the relevant hard disk drive connected thereto to be received by a user portable telephone. In both the user digital television and the user portable telephone, the databases for storing the

5 advertisement information and the coupon information, respectively, may be implemented in a single hard disk drive.

Figure 3 is a block diagram showing generally a structure of the service-providing server 201

10 employed in the system shown in Fig. 2. As can be seen in the figure, the service-providing server 201 includes a processor 301 on which an issue program 302 and a user identification program 303 can run. Further, a keyboard 304, a display device 305 and a

15 hard disk 306 are connected to the processor 301 of the service-providing server 201. The issue program 302 is programmed to determine to which of the user digital televisions and in what manner the advertisement-information-appended coupon information stored in the

20 hard disk 306 is to be issued. The user identification program 303 confirms whether or not the user is authorized on the basis of the ID information which is stored in the user digital television and/or the user portable telephone. The keyboard 304, the display

25 device 305 and the hard disk 306 are implemented and arranged similarly to those employed in the conventional personal computer.

Figure 4 is a block diagram showing a struc-

ture of the user digital television 205 employed in the
system shown in Fig. 2. The user digital television
205 includes a processor 401 on which a display program
402, a use program 403 and a user identification

5 program 404 can run. Connected to this user digital
television 205 are a remote control device 405, a
display device 406, a communication system 407 and a
hard disk drive 408. The display program 402
determines the manner in which the advertisement

10 information, the coupon information and the ID infor-
mation stored in the hard disk drive 408 are to be
displayed on the user digital television 205. The use
program 403 is activated when the user determines how
to make use of the coupon information. The user

15 identification program 404 is designed to identify
users when the user or a third party inputs a private
ID number to thereby allow the ID information stored in
the hard disk drive 408 to be accessed. The remote
control device 405 may be dedicated to the digital

20 television. A portable telephone may be used in place
of the remote control device. A remote control device
of the type which is capable of operating a digital
television by radio may be employed. Further, the
display device 406 serves as a display means for

25 displaying all collected coupon information as a single
screen image or alternatively as separate images, as
the case may be. The communication system 407 serves
as transmitting and receiving means for conveying

information between the service-providing server 201

and the user portable telephone 209. The communication

system 407 may be designed with two separate modules,

i.e., a communication module dedicated to communication

5   with the service-providing server 201 and a communica-

tion module dedicated for communication with the user

portable telephone 209, respectively. The hard disk

drive 408 may include a hard disk, an IC card or the

like whose contents cannot ordinarily be rewritten

10   freely by the user and a memory card or the like, whose

contents can freely be rewritten by the user.

Figure 5 is a block diagram showing the

structure of a user portable telephone 209 employed in

the system shown in Fig. 2. The user portable

15   telephone 209 includes a processor 501 on which a

display program 502, a use program 503 and a user

identification program 504 can run. Connected to the

user portable telephone are an input button array 505,

a display device 506, a radio system 507 and a hard

20   disk drive 508. The display program 502, the use

program 503 and the user identification program 504 are

substantially similar to those stored in the processor

401 of the user digital television described previously

by reference to Fig. 4. The input button array 505 is

25   provided for controlling the portable telephone. The

display device 506 is designed so as to display a

screen image divided into a foreground image and a

background image which can be displayed alternately

with each other. The radio system 507 is used for
performing information transactions with the user
digital television via radio. The hard disk drive 508
may comprise a hard disk or the like whose contents or

5 records cannot ordinarily be rewritten freely by the
user and a memory card or the like whose contents can
freely be rewritten by the user.

Referring to Figs. 6 to 8, a processing
procedure will be described for storing the coupon

10 information separately from the advertisement informa-
tion when the user digital television 205 receives the
advertisement-information-appended coupon information
from the service-providing server 201. .

Figure 6 is a flowchart illustrating a

15 processing procedure for storing the coupon information
after its separation from the advertisement infor-
mation. The user digital television 205 initially
receives the advertisement-information-appended coupon
information from the service-providing server 201 (step

20 601). An example of an advertisement-information-
appended coupon received by the user digital television
205 is illustrated in Fig. 7. As can be seen in this
figure, three pieces of coupon information are
contained in the advertisement information 701. They

25 are coupon information (1) 702, coupon information (2)
703 and coupon information (3) 704. Subsequently, the
coupon information is separated from the received
advertisement information (step 602). The images

resulting from the separation are illustrated in Fig. 8. As can be seen, appended to the advertisement information image 801 is a comment 802 stating that three coupons are appended. The coupon information

5 image 803 contains three pieces of coupon information, i.e., coupon information (1) 804, coupon information (2) 805 and coupon information (3) 806. After being separated from one another, the advertisement information and the coupon information are stored in

10 the hard disks 206 and 207, respectively, which are provided in association with the user digital television 205 (step 603 in Fig. 6).

By storing the coupon information separately from the advertisement information after the

15 advertisement-information-appended coupon information is received in the manner described above, it is possible to display the advertisement information exclusively on the digital television while the coupon information is stored separately in the portable

20 telephone.

Although the foregoing description has been directed to the coupon information appended to the advertisement information, it should be appreciated that what is taught in the present invention can be

25 applied equally to the issue or handling of the coupon information which is not appended to any advertisement information.

Referring now to Figs. 9 and 10, a processing

procedure will be described in which the service
provider sets a date of issue, a time zone of issue, an
issue site, the names of persons to whom coupons may be
addressed, the number of issues that may take place and

5   at what point the issue of the coupons is terminated
when the number of the coupons issued exceeds a
predetermined value.

Figure 9 is a flowchart illustrating
processing procedure for terminating the issue of the

10 coupon information when the number of the coupons
issued exceeds a predetermined value. The service
provider sets the date of issue, the time zone of
issue, the issue site, the names of persons to whom
coupons may be addressed, and the number of coupons to

15 be issued (step 901 to step 905). The contents
resulting from the setup described above are, for
example, such as illustrated in Fig. 10. Subsequently,
a determination is made by the processing procedure as
to whether or not the predetermined number of coupons

20 to be issued has been reached (step 907), and the
coupon information is issued on the basis of the
contents determined as mentioned above (step 906).
When the decision step 907 results in affirmation or
"YES" (indicating that the predetermined number of the

25 coupons to be issued has been reached), the issue
processing comes to an end.

In this manner, the service provider can
preset the date of issue, the time zone of issue, the

issue site, the names of persons to whom coupons may be issued, and the number of coupons that can be issued, until the termination of coupon issue occurs when the number thereof has reached a preset value.

5   Next, referring to Figs. 11 and 12, a processing procedure will be described for issuing coupon information in a case in which the service provider broadcasts coupon information to multiple, unspecified destinations and in which the coupon

10   information is issued only when the conditions for enabling receipt of the coupon information preset by the user are satisfied.

Figure 11 is a flowchart illustrating a processing procedure to achieve this end. At first,

15   the service-providing server broadcasts the coupon information to multiple and unspecified digital televisions (step 1101). In succession, each digital television acquires the conditions enabling receipt of coupon information, such as the type of coupon

20   information, the discount amount, the number of persons authorized to use the coupons, the designated store, the term of validity, etc., condition information which is stored in the portable telephone that has been preset by a user (step 1102 to step 1106). Examples of

25   conditions for receipt of the coupon information as preset by the user are illustrated in Fig. 12. As can be seen in the example in this figure, receipt-enabling conditions may be set designating the type of coupon

information to be a discount coupon, the discount amount of which is not smaller than 200 yen, and the number of authorized users of which is at least five, and so forth. Subsequently, the digital television

5   determines as to whether or not the coupon information broadcast satisfies all the conditions mentioned above (step 1107). In a case where the conditions are met, i.e., when the decision step 1107 results in "YES," the coupon information is issued (step 1108). If the step

10 1107 results in a "NO" indication, no coupon information is issued.

In this manner, even in the case where the service provider broadcasts the coupon information to multiple, unspecified destinations, the issue of the

15 coupon information is enabled only when the conditions preset by the user for the receipt of the coupon information are met. In other words, the user can refuse to receive unwanted coupon information.

Referring next to Fig. 13, a processing

20 procedure will be described in a case in which the service-providing server acquires information concerning the number of coupons which can be issued for one user so that it can then issue the allowable number of coupons.

25   At first, the service-providing server acquires the number of coupons which the service provider determines for one user on the basis of the ID information stored in the digital television or the

portable telephone (step 1301). Subsequently, a number of the coupons allowed to be issued to the use is sent to the user (step 1302). The coupon information sent in this case can be received by either the digital

5 television or the portable telephone.

In this way, because of the ability to determine the number of coupons allowed to be issued to one user, a proper number of issuable coupons can be issued to the user.

10 Referring next to Figs. 14 to 16, a processing procedure will be described for issuing family-oriented coupon information exclusively to the representative of a family, on the condition that the representative of the family is the user, while

15 withholding from other members of the family duplicate coupon information.

Figure 14 is a flowchart illustrating this processing procedure. Referring to the figure, the service-providing server first acquires the information

20 of the family of a user from the ID information stored in the digital television or portable telephone (step 1401). For example, the information of the user's family is illustrated in Fig. 15. First, a decision is made as to whether or not the user is the

25 representative of the family (step 1402). If this identity is confirmed, the family-oriented coupon information is sent exclusively to the portable telephone owned by the representative (step 1403). By

contrast, in a case in which the information of the
family of a child who is registered as the user has
been received, and in which it is further ascertained
that the child is not the representative of his or her
5   family, no coupon information is issued to that child.
The coupon information may be transmitted directly to
the portable telephone of the representative.
Alternatively, the coupon information may be sent once
to the digital television, which in turn can transmit
10   the coupon information to the portable telephone of the
family representative.

In this manner, by designating the
representative of the family as the condition for
receiving the coupon information, it is possible to
15   issue the coupon information only to the representative
of the family. Although a child (e.g. an under-age
person) may be identified as a member of a family, he
or she is not allowed to receive the family-oriented
coupon information unless the child is the specifically
20   designated representative of that family.

Referring next to Figs. 17 and 18, a
processing procedure is described for updating only
those items, such as discount amount, validity term or
the like, that are required to be altered upon reissue
25   of new coupon information similar to that issued
before.

Figure 17 is a flowchart illustrating a
processing flow. Initially, the digital television

receives from the service provider an update command
for various conditions concerning the coupon infor-
mation already issued (step 1701). Subsequently, on
the basis of the received update command, the discount

5   amount and the validity term stored in the hard disk
are updated (steps 1702 to 1703). Examples of the
coupon information before and after the updating of the
conditions are illustrated in the tables in Fig. 18,
wherein the top table shows the items before the

10 updating of the conditions, while the bottom table
shows the same items after the updating of the
conditions.

In this manner, in the case where coupon
information similar to the issued coupon information is

15 reissued, it is possible to restrict updating only to
the items required to be altered or changed.

Embodiment 2

A second embodiment of the present invention
is directed to techniques for displaying issued coupon

20 information. The system configuration adopted in
implementing this embodiment of the present invention
is similar to that described herein by reference to
Fig. 2. Block diagrams for the service-providing
server 201, the user digital television 205 and the

25 user portable telephone 209 are also similar to those
shown in Figs. 3, 4 and 5, respectively.

Figs. 19 to 21 illustrate a processing
procedure for displaying primarily the coupon

information in a sequential order of time limits

(coupon expiration dates) governed by the validity

terms. Figure 19 shows the processing steps of this

procedure. The coupon information selected for display

5 by a user on the user portable telephone 209 is

initially extracted from the database stored in the

user portable telephone (step 1901). Subsequently,

coupon information, whose contents are identical to the

coupon information being displayed except for the

10 validity term, is acquired (step 1902). An example of

the relevant coupon information is illustrated in the

table in Fig. 20. In this example, the coupon

information, which matches the coupon information

displayed with regard to the title of the coupon

15 information, comment, company name, store name, number

of coupons to be issued, discount amount and discount

rate. In step 1903, the processing procedure

determines whether all the coupon information matching

the coupon information selected by the user, except for

20 the validity terms, has been acquired. If so (i.e.,

when the decision step 1903 results is affirmative or

is a designation of "YES"), the coupon information is

sorted in accordance with the validity term (step

1904), so that the coupon information is rearrayed to

25 be displayed in the descending order of the time limits

set in the validity terms (step 1905). An example an

entire array of the coupon information displayed on a

screen of a portable telephone is illustrated in

Fig. 21. As can be seen in the figure, three pieces of coupon information are displayed on a coupon information screen 2101 in the order set by final limits designated in the validity terms.

5   In this manner, by displaying the coupon information in the order set by the final limits determined in the validity terms, a range of acquired coupon information with contents identical to coupon information the user has selected, except for the

10   validity term, can be made use of effectively within the parameters set in the validity terms.

Through a similar processing procedure, the validity term mentioned above can be replaced by the discount rate. In other words, acquisition and sorting

15   of the acquired coupon information are carried out through the use of the discount rate as the key instead of the validity term. A result of such processing is illustrated in Fig. 21 in the form of a screen image 2102.

20   In conjunction with the display of the coupon information in the descending order of the discount rates, a plurality of coupon information whose discount rates may be available for acquisition. In that case, through operation of a combination of relevant keys,

25   the user may display coupon information in an order of priority based on the validity terms and, more specifically, in the order of the expiration dates of the coupon information in addition to the descending

order of the discount rates.

Referring next to Figs. 22 and 23, a
processing procedure will be described for displaying
on a single image screen the coupon information which
5   can be used in combination, if available, among a
plurality of coupon information.

Figure 22 is a flowchart illustrating a
processing procedure to achieve this end. A user
initially selects and extracts for display coupon
10   information from the database stored in the user
portable telephone 209 (step 2201), as well as
performing a search for coupon information which can be
combined with the coupon information being displayed
(step 2202). The table shown in Fig. 20 is accessed to
15   determine if a combination of coupon information is
possible. More specifically, in the case of the
illustrated example, the coupon information noted as
"permissible" (see Fig. 20, ninth item from the top) is
the coupon information which can be used in combination
20   with other displayed coupon information. Subsequently,
the coupon information which can be used together with
the coupon information being displayed, if it exists,
is acquired to be thereby displayed concurrently with
the coupon information already displayed (step 2203).
25   Fig. 23 illustrates an example of such concurrent
display of the usable coupon information, from both the
original coupon information display and the
"permissible" coupon information search results, on the

image screen of the user portable telephone 209. More
specifically, illustrated in Fig. 23 are two pieces of
coupon information 2303 and 2304 displayed concurrently
with the coupon information 2302 initially displayed on
5   the display screen of the user portable telephone 209.
It it is understood that, for the user who is viewing
the user digital television 205, the coupons which can
be used in combination may be displayed concurrently on
the screen of the display 406 of the user digital
10 television 205.

In this way, by extracting from a plurality
of coupon information the coupon information permitted
to be combined, the user can use all available coupon
information effectively.

15   Referring next to Figs. 24 to 26, a
processing procedure will be described for displaying
the coupon information until the remaining number of
times allowed for enabling the display of the coupon
information expires.

20   Figure 24 is a flowchart illustrating a
processing procedure to achieve this end. Initially,
the coupon information selected and inputted by a user
of the user portable telephone 209 is extracted from
the database stored in the user portable telephone to
25 be thereby displayed (step 2401). Subsequently, the
number of times the coupon information can be displayed
is read out from the hard disk incorporated in the
digital television or the portable telephone (step

2402), at which point it is determined by the
processing procedure whether or not the coupon
information selected by the user can be displayed (step
2403). When the decision step 2403 is affirmative or a
designation of "YES," then the coupon information
selected by the user is displayed on the screen of the
portable telephone (step 2404), and the number of
display is incremented by one "+1" while the remaining
number of times the coupon information can be displayed
is decremented by one "-1" (step 2405). It is
understood that the total and remaining number of
times the coupon information can be displayed is set in
advance as illustrated in Fig. 25 by a record 2502 in a
table 2501, shown in the state preceding the display of
the coupon information. In the present example, the
number of times the coupon information can be displayed
is set to "5." In the initial state, the number of
times the coupon information can be displayed is "0" as
indicated by a record 2503 while the remaining number
of times the coupon information can be displayed is "5"
as indicated by a record 2504. The example in Fig. 26
illustrates coupon information displayed on a portable
telephone image screen 2601. At this stage of the
display process, the remaining number of times the
coupon can be displayed is "4." The contents of the
table, after the display of the coupon information, are
illustrated in Fig. 25. As can be seen in the figure,
the number of times the information was displayed is

updated to "1," as indicated by a record 2506, while the remaining number of times the coupon information can be displayed is updated to "4," as indicated by a record 2507. Incidentally, the information concerning

5   the number of times the coupon information can be displayed can be set freely by sending a copy control signal to the digital television together with the advertisement information-appended coupon information from a service provider such as a broadcasting station.

10   At the same time, forgery by a third person or party can effectively be prevented.

As is apparent from the above, by presetting the number of times the coupon information can be displayed, display of the coupon information beyond the

15   preset number can be prevented.

Referring next to Fig. 27, a processing procedure will be discussed for repeatedly displaying the coupon information any desired number of times until the validity term has lapsed. In step 2701, the

20   user accesses the database in the user portable telephone 209 to select, extract, and display coupon information, at which point the processing procedure determines (in step 2702) whether or not the final limit of the validity terms as written in the coupon

25   information table shown in Fig. 20 has been reached. When step 2702 results in a designation of "NO," the coupon information is displayed again.

When the validity term of the coupon

information is managed in this manner, the coupon

information can be displayed repeatedly so long as the

final limit of the validity term has not been reached.

Next, a processing procedure for displaying

5 alternate coupon information and ID information on the

image screen, in response to the input of a private ID

number (password), will be described by reference to

Figs. 28 to 30. Figure 28 is a flowchart illustrating

a processing procedure to achieve this end. As can be

10 seen in the figure, after the image screen displays the

desired coupon information that the user has selected

(step 2801), the user uses input button 505 to enter a

private ID number into user portable telephone 209,

causing the displayed coupon information to be combined

15 with the ID information (step 2802). It should be

added at this point that a comparable arrangement can

be adopted, in step 2802, in which the private ID

number is checked first to allow the user to select the

coupon information desired for use, at which point the

20 selected coupon information is displayed. The ID

information table of Fig. 29 illustrates such an

arrangement. In the case of the present example, the

customer's attribute information, such as his or her

name, sex or the like, is preset in combination with

25 the telephone number that is usually used for

representing the ID information of the portable

telephone. Subsequently, the coupon information,

combined with the ID information, are alternately

displayed on the display screen 506 of the user

portable telephone 209 (step 2803). Fig. 30

illustrates the coupon information displayed as a

foreground image and the ID information displayed as a

5   background image on the display screen of the portable

telephone. Descriptions appear on the coupon

information screen 3001 indicating that the persons to

whom the coupon information is issued are limited to

the residents in "Kawasaki city," the number of

10 persons capable receiving the bargain is "five," as

well as other descriptions. As is shown in the example

of the ID information display 3002, address-related

description 3003 and description of family composition

3004 are displayed, each enclosed by frames, combined

15 with the description of the issue-addressed persons

"residents in Kawasaki City" and the number of the use-

enabled person "5." In this combined image, the

information can be displayed intelligibly so that the

user can easily decide whether he or she is entitled to

20 make use of the coupon information. The time interval

for alternately displaying the images may be changed

depending on whether the operator who inputs the

private ID number is the user or a third person. For

example, when the user inputs the private ID number,

25 the time duration for displaying the ID information may

be set to the average amount of time the user usually

needs to ascertain the ID information, while, in the

case where a third person such as a store clerk at a

store designated to be eligible for coupon use, inputs

the private ID number, the display time of the ID

information is shortened, and so forth. Additionally,

an arrangement may also be used in which the display

5   position for the ID information as well as the size of

the characters therefor may be varied depending on the

preferences of the person controlling the checking of

the ID information. A potential operator may also be

forced to select whether he or she is an "authorized

10 user" or a "third person" before inputting the private

ID number.

Because the ID information can be extracted

only after the user entitled to use the ID information

has inputted the ID number, security of the ID

15 information can be much enhanced. Further, by

alternately displaying the coupon information and the

ID information, continuous display of the user's ID

information can be avoided. Continuous display may be

avoided even when a third person is permitted to

20 ascertain the user's ID information authenticity while

viewing the screen image simultaneously with the user.

In this case, whether or not the user can acsertain the

ID information without viewing the information being

displayed can easily be checked, and thus accuracy or

25 reliability of ascertaining the authenticity of the

user can be enhanced. Additionally, , display of those

items of the ID information which meet the conditions

for enabling use of the coupon information may be

omitted by confirming that these items have already
been completed, and the authenticity check may be
performed only for the remaining items. In the case of
coupon information relating to alcoholic beverages,
5   conditions may be imposed, stating that "use of the
coupon is limited to the customers older than 20 years
inclusive." When it is ascertained by checking the ID
information that these conditions have been met, then
display of the coupon information may then be disabled.
10 Alternatively, for example, the user may be asked a
question regarding one's birthday in the Japanese
calendar based on the date of one's birth in A. D.
which is being displayed.

Next, a processing procedure for alternately
15 displaying the coupon information and the advertisement
information will be described by reference to Figs. 31
and 32. Figure 31 shows a processing procedure to
achieve this end. As can be seen in the figure, the
user portable telephone 209 first acquires the user's
20 desired coupon information, as inputted through the
user's operation of the telephone's input button 505
(step 3101), at which point the coupon information is
combined with the advertisement information (step
3102), and then the advertisement information and the
25 coupon information are alternately displayed (step
3103). Examples of the advertisement information and
the coupon information are illustrated in Fig. 32 in
which the advertisement information is displayed as the

foreground image and the coupon is displayed as the background image on the display screen 506. Displayed on the advertisement information screen 3201 is a message 3202 indicating that the coupon information is

5 appended in addition to the contents of advertisement. The coupon information 3204 and 3202 that is allowed to be used are displayed on the coupon information screen 3203. When a plurality of advertisement information exists for single coupon information, a display of

10 multiple units of advertisement information is desirable from the standpoint of advertisers.

As will now be appreciated from the foregoing, according to the teachings of the present invention as shown in the embodiments described above,

15 relevant advertisement information is presented to the user every time the coupon information is accessed to be used, which means that the opportunity for the advertisement to be seen or read by the user can be significantly increased. Furthermore, when the

20 validity term of the coupon information has expired, display or presentation of advertisement information can be disabled on the basis of the expiration date information stored in the portable telephone, which means that the necessity of storing in the hard disk of

25 the portable telephone, or the like, large amounts of advertisement information data, such as image or graphic data, can be reduced or avoided.

When the displayed coupon information, as

shown in previous descriptions of embodiments of the present invention,is used by the user, the coupon information and the user's ID information, both stored in the portable telephone or the like, are sent in

5   combination to a store which is designated to handle the coupon. The information composed of the combined coupon information and user's ID information is transferred to the business which issued that coupon information. Thus, the business can collect types of

10 coupons as well as profile the users' traits, such as gender, age, or the like, and the business can make efficient use of the acquired information for marketing purposes.

The present invention thus provides the

15 advantage of enhancing the efficiency of issuing coupon information to users by issuing coupon information that satisfies prescribed conditions, .

Furthermore, according to the teachings of the present invention, the efficiency of coupon use can

20 be remarkably increased by displaying, on the image screen of a portable telephone or the like, coupon information, together with important or interesting items such as validity terms, discount rates, and the like.

25 It should be further understood by those skilled in the art that the foregoing description has been made of embodiments of the invention and that various changes and modifications may be made to the

invention without departing from the spirit of the invention and the scope of the appended claims.